

IN THE CLAIMS:

Claims 1-63 (Cancelled).

64. (New) A roofing or siding system having an average resulting reflectivity of about 50-95% comprising a roofing or siding material having an adhering surface on which a plurality of granules are at least partially secured a top surface thereto, said adhering surface including asphalt, bitumen, foam, adhesive, or combinations thereof, a plurality of said granules being partially
5 embedded in said top surface of said adhering surface, said granules covering over about 95% of said top surface of said adhering surface, said granules having an average reflectivity of at least about 55-99.9%, an average hardness of over about 4 Moh's, an average opacity of at least about 60%, and an average porosity of about 0-15%, a plurality of said granules include silicon dioxide and at least about 45 weight percent aluminum oxide and having a weight percent ratio of aluminum oxide to silicon dioxide of about 0.8-10:1.

65. (New) The roof or siding system as defined in claim 64, wherein at least two different sized granules are partially embedded in said top surface of said adhering surface, said first size of granules having an average particle size that is greater than an average particle size of second sized granules, a size ratio of said first sized granules to said second sized granules is at least about 1.3:1.

66. (New) The roof or siding system as defined in claim 64, wherein a plurality of granules comprise:

Al ₂ O ₃	at least about 45 weight percent
SiO ₂	up to about 54 weight percent
Fe ₂ O ₃	up to about 0.5 weight percent
CaO	up to about 0.1 weight percent
MgO	up to about 0.1 weight percent

TiO ₂	up to about 0.8 weight percent
Na ₂ O	up to about 0.05 weight percent
K ₂ O	up to about 0.03 weight percent.

67. (New) The roof or siding system as defined in claim 65, wherein a plurality of granules comprise:

5	Al ₂ O ₃	at least about 45 weight percent
	SiO ₂	up to about 54 weight percent
	Fe ₂ O ₃	up to about 0.5 weight percent
	CaO	up to about 0.1 weight percent
	MgO	up to about 0.1 weight percent
	TiO ₂	up to about 0.8 weight percent
	Na ₂ O	up to about 0.05 weight percent
	K ₂ O	up to about 0.03 weight percent.

68. (New) The roof or siding system as defined in claim 66, wherein a plurality of granules comprise:

5	Al ₂ O ₃	about 45 - 74 weight percent
	SiO ₂	about 20 - 52 weight percent
	Fe ₂ O ₃	about 0.3 - 1.3 weight percent
	CaO	up to about 0.1 weight percent
	MgO	up to about 0.1 weight percent
	TiO ₂	up to about 3 weight percent
	Na ₂ O + K ₂ O	up to about 0.65 weight percent

69. (New) The roof or siding system as defined in claim 67, wherein a plurality of granules comprise:

5	Al ₂ O ₃	about 45 - 74 weight percent
	SiO ₂	about 20 - 52 weight percent
	Fe ₂ O ₃	about 0.3 - 1.3 weight percent
	CaO	up to about 0.1 weight percent
	MgO	up to about 0.1 weight percent
	TiO ₂	up to about 3 weight percent
	Na ₂ O + K ₂ O	up to about 0.65 weight percent

70. (New) The roof or siding system as defined in claim 64, wherein said granules cover over about 98% of said top surface of said adhering surface.

71. (New) The roof or siding system as defined in claim 69, wherein said granules cover

over about 98% of said top surface of said adhering surface.

72. (New) The roof or siding system as defined in claim 64, wherein said roofing or siding material includes a composite fabric.

73. (New) The roof or siding system as defined in claim 71, wherein said roofing or siding material includes a composite fabric.

74. (New) A roofing or siding system having an average resulting reflectivity of about 50-95% comprising a roofing or siding material having an adhering surface on which a plurality of granules are at least partially secured a top surface thereto, said adhering surface including asphalt, bitumen, foam, adhesive, or combinations thereof, a plurality of said granules being partially embedded in said top surface of said adhering surface, said granules covering over about 95% of said top surface of said adhering surface, said granules having an average reflectivity of at least about 55-99.9%, an average hardness of over about 4 Moh's, an average opacity of at least about 60%, and an average porosity of about 0-15%, a plurality of said granules include silicon dioxide and at least about 94 weight percent aluminum oxide and having a weight percent ratio of aluminum oxide to silicon dioxide of about 15-8000:1.

75. (New) The roof or siding system as defined in claim 74, wherein at least two different sized granules are partially embedded in said top surface of said adhering surface, said first size of granules having an average particle size that is greater than an average particle size of second sized granules, a size ratio of said first sized granules to said second sized granules is at least about 1.3:1.

76. (New) The roof or siding system as defined in claim 74, wherein a plurality of granules comprise:

Al ₂ O ₃	at least about 94 weight percent
SiO ₂	up to about 0.1 weight percent
Fe ₂ O ₃	up to about 0.15 weight percent
CaO	up to about 0.12 weight percent
Na ₂ O	up to about 0.35 weight percent

77. (New) The roof or siding system as defined in claim 75, wherein a plurality of

granules comprise:

5	Al_2O_3	at least about 94 weight percent
	SiO_2	up to about 0.1 weight percent
	Fe_2O_3	up to about 0.15 weight percent
	CaO	up to about 0.12 weight percent
	Na_2O	up to about 0.35 weight percent

78. (New) The roof or siding system as defined in claim 76, wherein a plurality of granules comprise:

5	Al_2O_3	at least about 99 weight percent
	SiO_2	up to about 0.1 weight percent
	Fe_2O_3	up to about 0.15 weight percent
	CaO	up to about 0.12 weight percent
	Na_2O	up to about 0.35 weight percent

79. (New) The roof or siding system as defined in claim 77, wherein a plurality of granules comprise:

5	Al_2O_3	at least about 99 weight percent
	SiO_2	up to about 0.1 weight percent
	Fe_2O_3	up to about 0.15 weight percent
	CaO	up to about 0.12 weight percent
	Na_2O	up to about 0.35 weight percent

80. (New) The roof or siding system as defined in claim 74, wherein said granules cover over about 98% of said top surface of said adhering surface.

81. (New) The roof or siding system as defined in claim 79, wherein said granules cover over about 98% of said top surface of said adhering surface.

82. (New) The roof or siding system as defined in claim 74, wherein said roofing or siding material includes a composite fabric.

83. (New) The roof or siding system as defined in claim 81, wherein said roofing or siding material includes a composite fabric.

84. (New) A roofing or siding system having an average resulting reflectivity of about

50-95% comprising a roofing or siding material having an adhering surface on which a plurality of granules are at least partially secured a top surface thereto, said adhering surface including asphalt, bitumen, foam, adhesive, or combinations thereof, a plurality of said granules being partially embedded in said top surface of said adhering surface, said granules covering over about 95% of said top surface of said adhering surface, said granules having an average reflectivity of at least about 55-99.9%, an average hardness of over about 4 Moh's, an average opacity of at least about 60%, and an average porosity of about 0-15%, a plurality of said granules include crushed porcelain, said porcelain including silicon dioxide and at least about 25 weight percent aluminum oxide and having a weight percent ratio of aluminum oxide to silicon dioxide of at least about 0.2:1.

85. (New) The roof or siding system as defined in claim 84, wherein at least two different sized granules are partially embedded in said top surface of said adhering surface, said first size of granules having an average particle size that is greater than an average particle size of second sized granules, a size ratio of said first sized granules to said second sized granules is at least about 1.3:1.

86. (New) The roof or siding system as defined in claim 84, wherein said crushed porcelain having a weight percent ratio of aluminum oxide to silicon dioxide of at least about 0.25-2:1 and a weight percent of aluminum oxide plus and silicon dioxide of at least about 75%.

87. (New) The roof or siding system as defined in claim 85, wherein said crushed porcelain having a weight percent ratio of aluminum oxide to silicon dioxide of at least about 0.25-2:1 and a weight percent of aluminum oxide plus and silicon dioxide of at least about 75%.

88. (New) The roof or siding system as defined in claim 86, wherein said crushed porcelain having a weight percent ratio of aluminum oxide to silicon dioxide of at least about 0.25-1:1 and a weight percent of aluminum oxide plus and silicon dioxide of at least about 85%.

89. (New) The roof or siding system as defined in claim 87, wherein said crushed porcelain having a weight percent ratio of aluminum oxide to silicon dioxide of at least about 0.25-1:1 and a weight percent of aluminum oxide plus and silicon dioxide of at least about 85%.

90. (New) The roof or siding system as defined in claim 84, wherein said granules cover

over about 98% of said top surface of said adhering surface.

91. (New) The roof or siding system as defined in claim 89, wherein said granules cover over about 98% of said top surface of said adhering surface.

92. (New) The roof or siding system as defined in claim 84, wherein said roofing or siding material includes a composite fabric.

93. (New) The roof or siding system as defined in claim 91, wherein said roofing or siding material includes a composite fabric.

5 94. (New) A roofing or siding system having an average resulting reflectivity of about 45-99% comprising an roofing or siding substrate coated with adhering material, said roofing or siding substrate including a composite fabric, said adhering material including a top surface on which a plurality of granules are partially embedded in and secured thereto, said adhering material
10 including asphalt, bitumen, or combinations thereof, said granules covering over about 95% of said top surface of said adhering material, said granules having an average reflectivity of about 55-99.9% and an average hardness of at least about 4 Moh's hardness, said granules including silicon dioxide and at least about 45 weight percent aluminum oxide, said silicon dioxide of said silicon dioxide plus said weight percent of said aluminum dioxide at least about 74 weight percent of said granules, said granules having an average opacity of at least about 55%, and an average porosity of less than about 20%.

95. (New) The roof or siding system as defined in claim 94, wherein at least two different sized granules are partially embedded in said top surface of said adhering material, said first size of granules having an average particle size that is greater than an average particle size of second sized granules, a size ratio of said first sized granules to said second sized granules is at least about 1.3:1.

96. (New) The roofing and/or siding system as defined in claim 95, wherein said granules cover over 98% of said top surface of said adhering material.